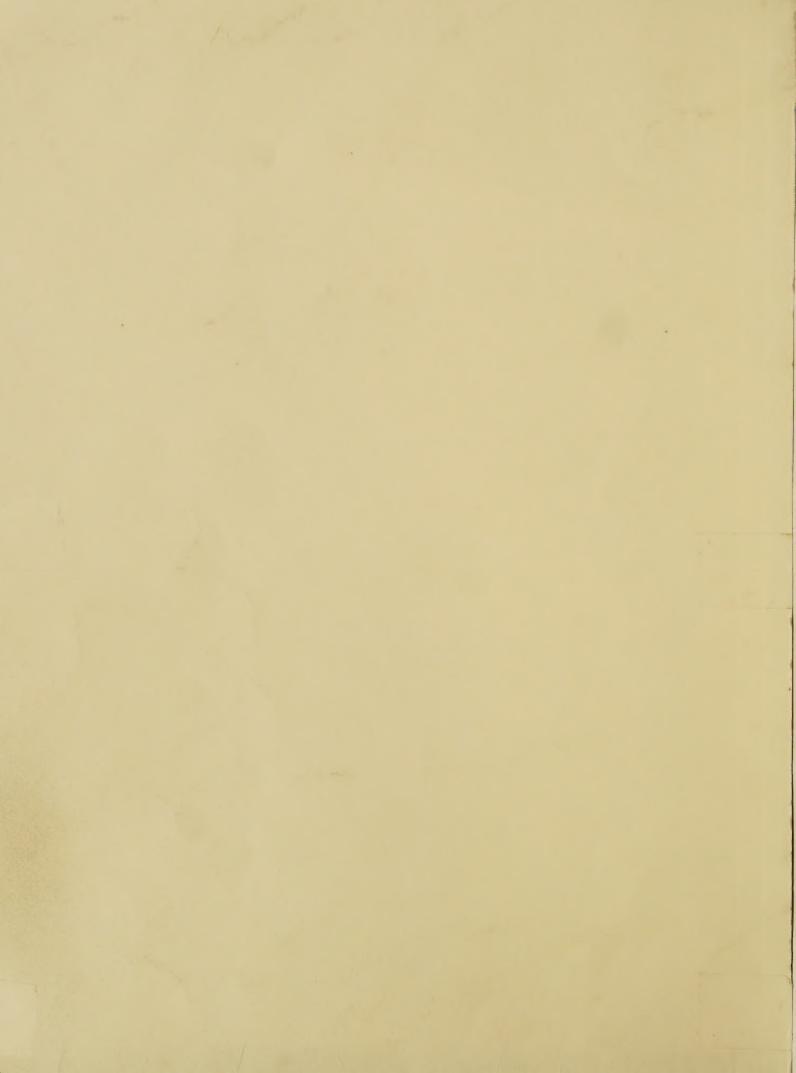
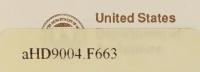
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Food Costs . . . From Farm to Retail

Service

April 1988

What's happening to food costs? How much are they changing, and why? How much of the food dollar goes to the farmer and how much to food processors and marketers? Because of the great interest in these questions, Congress has directed the U.S. Department of Agriculture (USDA) to study them regularly and to report its findings. This pamphlet, from USDA's Economic Research Service, brings you up to date on the answers, focusing on developments during 1987.

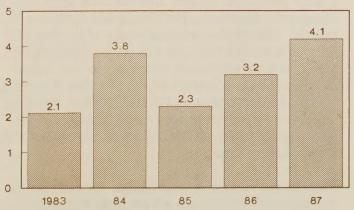
Food Prices Rose More in 1987

Retail food prices last year rose more than in other recent years. Food prices, as measured by the Consumer Price Index (CPI), rose 4.1 percent, up from the 3.2-percent rise in 1986. The increase was the largest since 1981 when the rate of inflation sharply slowed.

Food prices rose more at supermarkets and other grocery stores than at eating places for the first time in 9 years. Prices at grocery stores went up 4.3 percent while restaurant meal prices climbed 4 percent, which was nearly the same rate as in 1985 and 1986. However, food prices in grocery stores rose much more than in the previous year, mainly because of sharp price increases for meat and fresh fruits and vegetables.

Retail Food Prices

Annual percent change



Changes in Consumer Price Index for food and other items

Year	Total		ood Away from home	CPI (all items)	All items less food
			Percent		
1980	8.6	8.0	9.9	13.5	14.6
1981	7.9	7.3	9.0	10.4	10.9
1982	4.0	3.4	5.3	6.1	6.6
1983	2.1	1.1	4.4	3.2	3.4
1984	3.8	3.7	4.2	4.3	4.4
1985	2.3	1.4	4.0	3.6	3.9
1986	3.2	2.9	3.9	1.9	1.6
1987	4.1	4.3	4.0	3.6	3.5

Source: U.S. Department of Labor, Bureau of Labor Statistics.

The rise in retail prices in 1987 reflected smaller supplies of a few commodities that pushed up the prices farmers received for the first year since 1984. The farm value of foods averaged almost 3 percent higher, reflecting a significant boost in cattle prices and higher grower prices for fruits and vegetables.

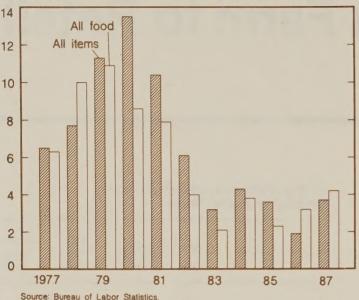
However, the rise in retail food prices was mainly the result of further increases in the farm-to-retail price spread. That price spread represents the costs of processing and distributing foods and usually has a greater effect on food prices than the farm value because it represents about 70 percent of the food dollar spent at the supermarket. Inflation last year caused manufacturers and retailers to raise food prices to cover higher business costs such as labor, food packaging, and advertising and to improve profits. Increased consumer demand for food, reflecting modest gains in income and lower unemployment, was not sufficient to greatly inflate food prices.

Food Prices Up More Than Average

For the second consecutive year, food prices in 1987 rose faster than the CPI for all consumer products and

Food Prices Rose Slightly More Than Other Consumer Prices

Annual percentage change



services, 4.1 versus 3.6 percent. Before 1986, food prices rose by less than the average overall CPI for 7 consecutive years.

Among the major items in the CPI, housing and transportation prices rose 3 percent, apparel and upkeep prices rose 4.4 percent, and medical care went up 6.6 percent. Overall inflation averaged 3.6 percent in 1987 compared with 1.9 percent in 1986, which was the lowest rate since 1965.

Retail Prices of Most Foods Rose

Prices of most foods that we buy at the supermarket averaged higher in 1987. However, price changes varied widely among the various food groups. Prices of fresh fruits and vegetables rose the most, up by 12 percent. Red meat prices, which account for about a fifth of the CPI for food consumed at home, increased 7.5 percent and accounted for about 37 percent of the increase in that index. However, poultry prices dropped about 1.5 percent and egg prices dropped 6 percent. Prices of dairy products rose 2.5 percent, the largest increase in 6 years. Prices of cereals and baked goods and other highly processed foods rose 3-4 percent.

Here's a wrap-up of price changes at the supermarket last year, as measured by the CPI.

Meat. Prices of beef and veal rose 7.6 percent in 1987, the largest increase since 1982. However, there was little change in beef prices from 1980 to 1986. Last year, beef production declined about 3 percent, causing the rise in prices.

For a second consecutive year, retail pork prices rose 8.2 percent. Lower pork production during much of the year and the smaller supply of beef put upward pressure on pork prices. Fourth-quarter increases in pork production brought prices down from record highs in September.

Poultry and Eggs. Despite a 10-percent increase in production, retail poultry prices averaged only 1.4 percent lower in 1987, reflecting strong consumer demand. Demand for chicken and turkey was strengthened by rising beef and pork prices and the growing market for highly processed products. Poultry consumption increased to 78 pounds per person in 1987, 5.5 pounds more than in 1986 and 14 pounds more than in 1982.

Egg prices were down 5.9 percent. Encouraged by lower production costs, producers increased egg production last year. The larger supplies of eggs caused prices to decline, reflecting a long-term decline in egg consumption.

Dairy Products. Retail prices of milk and other dairy products averaged 2.5 percent higher in 1987. Increases were slightly larger for manufactured products than for fluid milk. For the seventh straight year, retail dairy prices trailed those of all foods. Falling real retail prices and heavy promotion increased commercial use of dairy products by about 2 percent, extending the industry's sustained growth since 1983.

Fish and Shellfish. Prices of fish and shellfish increased 10.6 percent, more than for most other food components of the CPI. Those steeply higher prices reflected strong demand for seafood and a tight supply. New conservation measures in this country and Canada to prevent overfishing have limited some domestic supplies in recent years.

Cereals and Bakery Products. Higher marketing charges and strong demand boosted the CPI for cereal and bakery products by 3.5 percent. Among the principal foods in this group, the largest price increase was about 6 percent for cereal. This relatively large price increase reflects robust growth in sales of ready-to-eat cereals. Those sales are up because of growing consumer demand for products that are perceived to be nutritionally beneficial and convenient to use. Large supplies and low prices for wheat, rice, and other food grains held down ingredient costs last year. However, retail prices went up because over 90 percent of the retail price of cereal and baked goods pays processing and marketing costs.

Processed Fruits and Vegetables. Processed fruit and vegetable prices rose 3.5 percent. Prices for fruit

juices and other processed fruit products rose more than prices for processed vegetables.

Fats and Oils. The fats and oils component of the food CPI averaged 1.5 percent higher in 1987. However, excessive supplies of soybean and other vegetable oils reduced prices of edible oil products. Retail prices for shortening and margarine dropped 10-12 percent. Retail prices for peanut butter, however, increased about 13 percent. Peanut supplies in 1987 were down 18 percent because of a 1986 drought.

Nonalcoholic Beverages. Nonalcoholic beverages averaged almost 3 percent lower in 1987. Coffee prices dropped over 12 percent following a sharp price rise in 1986 after a drought in Brazil. Retail prices of carbonated drinks rose 2 percent.

Fresh Fruits and Vegetables. Fresh fruit prices averaged about 11 percent higher in 1987. Orange prices were 25 percent above 1986 when prices had significantly declined. Last year's higher orange prices resulted from reduced supplies for the fresh market

How Register Tapes Compared:

Average U.S. food prices

Item and unit size			~~~
Chicken, whole, 1 lb. Eggs, Grade A large, 1 doz. Bread, white, 1 lb. Rice, long grain, uncooked, 1 lb. Coffee, ground, 1 lb. Shortening, veg. oil blend, 1 lb. Apples, red delicious, 1 lb. Crange juice, frozen, 12 fl. oz. Some prices rose Pork chops, center cut, 1 lb. Round beef roast, boneless, 1 lb. Bacon, 1 lb. Frankfurters, all meat, 1 lb. Cheese, American processed, 1 lb. Lettuce, 1 lb. Lec cream, regular, 1/2 gal. Potato chips, 1 lb. Cookies, chocolate chip, 1 lb. Cothers stayed the same Ground chuck, 100% beef, 1 lb. Comparison of the comparison of the control of the con	Item and unit size	1986	1987
Chicken, whole, 1 lb. Eggs, Grade A large, 1 doz. Bread, white, 1 lb. Rice, long grain, uncooked, 1 lb. Coffee, ground, 1 lb. Shortening, veg. oil blend, 1 lb. Apples, red delicious, 1 lb. Crange juice, frozen, 12 fl. oz. Some prices rose Pork chops, center cut, 1 lb. Round beef roast, boneless, 1 lb. Bacon, 1 lb. Frankfurters, all meat, 1 lb. Cheese, American processed, 1 lb. Lettuce, 1 lb. Lec cream, regular, 1/2 gal. Potato chips, 1 lb. Cookies, chocolate chip, 1 lb. Cothers stayed the same Ground chuck, 100% beef, 1 lb. Comparison of the comparison of the control of the con	Some prices fell		
Eggs, Grade A large, 1 doz. Bread, white, 1 lb. Brice, long grain, uncooked, 1 lb. Coffee, ground, 1 lb. Shortening, veg. oil blend, 1 lb. Apples, red delicious, 1 lb. Orange juice, frozen, 12 fl. oz. Some prices rose Pork chops, center cut, 1 lb. Bacon, 1 lb. Bacon, 1 lb. Frankfurters, all meat, 1 lb. Cheese, American processed, 1 lb. Lettuce, 1 lb. Lec cream, regular, 1/2 gal. Potato chips, 1 lb. Cookies, chocolate chip, 1 lb. Dothers stayed the same Ground chuck, 100% beef, 1 lb. Comparison of the control of the con		\$0.84	\$0.78
Bread, white, 1 lb. Rice, long grain, uncooked, 1 lb. Coffee, ground, 1 lb. Shortening, veg. oil blend, 1 lb. Apples, red delicious, 1 lb. Corange juice, frozen, 12 fl. oz. Some prices rose Pork chops, center cut, 1 lb. Round beef roast, boneless, 1 lb. Bacon, 1 lb. Frankfurters, all meat, 1 lb. Cheese, American processed, 1 lb. Lettuce, 1 lb. Loc cream, regular, 1/2 gal. Peanut butter, 1 lb. Cookies, chocolate chip, 1 lb. Potato chips, 1 lb. Cothers stayed the same Ground chuck, 100% beef, 1 lb. Compared to the control of the contro			
Rice, long grain, uncooked, 1 lb		1.77	1
Coffee, ground, 1 lb. 3.43 2.78 Shortening, veg. oil blend, 1 lb			
Shortening, veg. oil blend, 1 lb			
Apples, red delicious, 1 lb		.87	.78
Orange juice, frozen, 12 fl. oz. 1.16 1.15 Some prices rose Pork chops, center cut, 1 lb. 2.59 2.82 Milk, whole, 1/2 gal. 1.11 1.14 Round beef roast, boneless, 1 lb. 2.44 2.53 Potatoes, 1 lb. 2.08 2.14 Frankfurters, all meat, 1 lb. 1.93 1.99 Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb. .53 62 Ice cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51		.77	.73
Some prices rose Pork chops, center cut, 1 lb. 2.59 2.82 Milk, whole, 1/2 gal. 1.11 1.14 Round beef roast, boneless, 1 lb. 2.44 2.53 Potatoes, 1 lb. 2.08 2.14 Frankfurters, all meat, 1 lb. 1.93 1.99 Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb. .53 .62 lce cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51		1.16	1.15
Pork chops, center cut, 1 lb. 2.59 Milk, whole, 1/2 gal. 1.11 Round beef roast, boneless, 1 lb. 2.44 Potatoes, 1 lb. .24 Bacon, 1 lb. 2.08 Frankfurters, all meat, 1 lb. 1.93 Cheese, American processed, 1 lb. 2.60 Lettuce, 1 lb. .53 Ice cream, regular, 1/2 gal. 2.36 Peanut butter, 1 lb. 1.60 Cookies, chocolate chip, 1 lb. 1.99 Potato chips, 1 lb. 2.68 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 Flour, 1 lb. .21 Tomatoes, canned, 1 lb. .51			
Milk, whole, 1/2 gal. 1.11 1.14 Round beef roast, boneless, 1 lb. 2.44 2.53 Potatoes, 1 lb. .24 .28 Bacon, 1 lb. 2.08 2.14 Frankfurters, all meat, 1 lb. 1.93 1.99 Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb. .53 .62 Ice cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Some prices rose		
Round beef roast, boneless, 1 lb. 2.44 2.53 Potatoes, 1 lb. .24 .28 Bacon, 1 lb. 2.08 2.14 Frankfurters, all meat, 1 lb. 1.93 1.99 Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb. .53 .62 Ice cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Pork chops, center cut, 1 lb.	2.59	2.82
Potatoes, 1 lb.	Milk, whole, 1/2 gal.	1.11	1.14
Bacon, 1 lb. 2.08 2.14 Frankfurters, all meat, 1 lb. 1.93 1.99 Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb. .53 .62 Ice cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Round beef roast, boneless, 1 lb.	2.44	2.53
Frankfurters, all meat, 1 lb. 1.93 1.99 Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb. .53 .62 Ice cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Potatoes, 1 lb.	.24	.28
Cheese, American processed, 1 lb. 2.60 2.69 Lettuce, 1 lb53 .62 lce cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. 2.1 .21 Tomatoes, canned, 1 lb51	Bacon, 1 lb.	2.08	2.14
Lettuce, 1 lb	Frankfurters, all meat, 1 lb.	1.93	1.99
Ice cream, regular, 1/2 gal. 2.36 2.46 Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Cheese, American processed, 1 lb.	2.60	2.69
Peanut butter, 1 lb. 1.60 1.80 Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Lettuce, 1 lb.	.53	.62
Cookies, chocolate chip, 1 lb. 1.99 2.00 Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Ice cream, regular, 1/2 gal.	2.36	2.46
Potato chips, 1 lb. 2.68 2.75 Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Peanut butter, 1 lb.	1.60	1.80
Others stayed the same Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb. .21 .21 Tomatoes, canned, 1 lb. .51 .51	Cookies, chocolate chip, 1 lb.	1.99	2.00
Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb21 .21 Tomatoes, canned, 1 lb51	Potato chips, 1 lb.	2.68	2.75
Ground chuck, 100% beef, 1 lb. 1.63 1.63 Flour, 1 lb21 .21 Tomatoes, canned, 1 lb51			
Flour, 1 lb21 .21 .21 .51 .51			10.000
Tomatoes, canned, 1 lb51 .51			
Sugar, white, 1 lb34 .34			1
- Mary	Sugar, white, 1 lb.	.34	.34
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Source: U.S. Department of Labor, Bureau of Labor Statistics.

and stronger demand, particularly for overseas sales of fresh oranges. Apple prices were sharply higher during the first half, but a record harvest dropped prices in the fall.

Fresh vegetable prices rose 13 percent. Lettuce prices were up about 21 percent, mainly because of rains and pest infestations in California that sharply cut supplies in November and December. A smaller potato harvest in 1986, down 11 percent from 1985, boosted retail potato prices by 21 percent in 1987. Prices of other fresh vegetables also were higher, including a 5-percent rise in tomato prices.

#### **Farm Value Rose**

Farm prices of food commodities, boosted by higher cattle prices, averaged higher in 1987, but the rise trailed the increase in retail food prices. The farm value (what farmers receive) of USDA's "market basket" of foods rose 2.7 percent in 1987 (see "About the Market Basket," below). Farm value had dropped 8 percent over the previous 2 years. As a result, the 1987 farm value of foods was lower than in 1984 when smaller supplies of some commodities raised the farm value of the market basket.

Farmers received 8 percent more for red meat in USDA's market basket in 1987 than in 1986, reflecting

#### **About the Market Basket**

USDA uses its market basket concept to track price changes for commodities farmers sell and the foods consumers buy in retail foodstores. The market basket contains the average quantities of domestically produced food for at-home consumption purchased in a base period. Changes in retail prices of the market basket are components of the CPI for all food, excluding non-alcoholic beverages, and fish and seafood.

The **farm value** represents prices farmers receive for the raw commodities equivalent to foods in the market basket.

The farm-to-retail price spread is the difference between the retail price and farm value. The price spread is the charge for processing, distributing, and retailing foods.

The farm value share is the proportion the farmer gets from the amount consumers spend on the market basket of food purchased in retail foodstores.

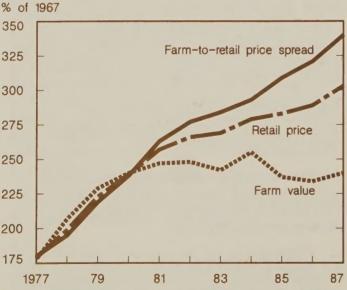
higher cattle prices. For 1 pound of Choice grade beef selling for \$2.43 in 1987, cattle producers received \$1.38 for the equivalent quantity of live animal (2.4 pounds), 14 cents more than in 1986. Higher grower prices for fruits and vegetables also increased the farm value of the market basket. Farm values rose 23 percent for fresh vegetables and 8 percent for processed fruits and vegetables. Slightly higher producer prices for milk used in fluid products raised the farm value of dairy products. A half-gallon of fluid milk retailing for \$1.14 returned the producer about 55 cents, 1 cent more than in 1986.

Farm values were lower for many commodities, including both poultry and eggs. Farm value of poultry dropped about 19 percent, reflecting a sharp 9-percent increase in production. Broiler chicken producers

#### Market basket of foods produced on U.S. farms

Year	Farm value of food	Retail store price	Farm-to-retail price spread	Farm value share of retail price
	Pe	rcentage chai	nae	Percent
1980	5.1	7.2	8.6	37
1981	2.8	7.7	10.5	36
1982	.2	3.6	5.5	34
1983	-2.2	.9	2.5	33
1984	5.4	3.9	3.2	34
1985	-7.1	1.2	5.5	31
1986	-1.3	2.2	3.7	30
1987	2.7	5.0	6.0	29

## Retail Price, Farm Value, and Price Spread for Food



Data for a market basket of foods sold in retail stores. Retail price is that paid by consumers. Farm value is prices received by farmers for commodities. Price spread represents all charges for processing and distribution.

received 39 cents of the average retail price of 78 cents per pound of frying chicken, about 7 cents less than in 1986. Egg producers received 48 cents for a dozen eggs selling for 78 cents in the store, 6 cents less than in 1986.

The farm value of fats and oils declined 4 percent, mainly because of lower prices for soybean oil, the principal oil used in shortening and margarine. The farm value of cereals and baked goods fell 8 percent, reflecting a decline in prices of wheat, corn, and rice. Farmers received only 3.3 cents for the wheat used in a 1-pound loaf of white bread selling for 55 cents in supermarkets, 0.2 cent less than in 1986. The farm value of other bread ingredients, primarily shortening and sweeteners, was 0.5 cent, unchanged from 1986.

#### **Farm Value Share Dropped**

The farm value share is what the farmer receives from the amount consumers spend on a market basket of foods purchased in retail foodstores. Over time, the share reflects relative changes in farm and retail food prices. A decline in the share means that prices received by producers have declined in relation to prices in foodstores.

#### Farm value share of foodstore prices

Food	1987 retail price	Farm value	Farm value share of retail price
	Dolla	ars	Percent
Eggs, Grade A large, 1 doz. Choice beef, 1 lb. Chicken, broiler, 1 lb. Milk, 1/2 gal. Pork, 1 lb. Frozen orange juice, 12 fl. oz. Cheese, natural cheddar, 1 lb. Sugar, 1 lb. Potatoes, Northeast, 10 lbs. Peanut butter, 1 lb.	0.78 2.42 .78 1.14 1.88 1.11 3.06 .34 2.40 1.80	0.48 1.38 .39 .56 .83 .42 1.10 .12 .62	62 57 50 49 44 37 36 35 26
Flour, wheat, all purpose, 5 lbs. Shortening, 3-lb. can Oranges, Calif., 1 lb. Margarine, 1 lb. Lettuce, 1 lb.  Rice, long grain, 1 lb. Potatoes, frozen, french fried, 1 lb. Tomatoes, 1-lb. can White bread, 1 lb.	1.02 2.33 .55 .69 .59 .40 .69 .51	.27 .44 .10 .12 .10 .06 .08 .05	26 19 18 17 17 15 12 9

Computed from unrounded data.

The farm value for a market basket of foods averaged 29 percent of the retail price, down from 30 percent in 1986 and 34 percent in 1984. The farm share declined because abundant food supplies held down farm prices while rising food processing and distributing charges boosted retail prices.

The size of the farm value share is not a direct measure of the welfare of producers, but a shortrun decrease often accompanies a decline in farm income. Last year, net farm income increased, but mainly because of higher Government payments.

Farm value shares vary greatly among foods. Farm value is a much larger percentage of the retail price of meats, eggs, poultry, and dairy products than for most other foods. For example, the 1987 farm value share was 57 percent for Choice beef, 62 percent for eggs, and 50 percent for broiler chicken. Thus, changes in prices received by farmers for these commodities usually affect retail food prices the most. For example, lower farm prices for eggs and poultry caused a decrease in retail egg and poultry prices. Cattle prices increased, as did Choice beef prices.

The farm value of foods from grains and oilseeds represents a small share of the retail price. Last year, farmers received about 7 percent of the retail prices of cereal and bakery goods and 18 percent of the retail prices of fats and oils. Thus, declines in the farm value

Price spread for beef declined slightly, but pork spread widened

Meat	Retail price per pound	Farm value ¹	Farm-to-retail price spread	Farm value share of retail price
		Dollars		Percent
Choice beef:				
1980	2.38	1.45	0.93	61
1981	2.39	1.39	1.00	58
1982	2.42	1.40	1.02	58
1983	2.38	1.36	1.02	57
1984	2.40	1.40	1.00	58
1985	2.33	1.27	1.06	55
1986	2.31	1.24	1.06	54
1987	2.43	1.38	1.05	57
Pork:				
1980	1.39	.63	.76	45
1981	1.52	.70	.82	46
1982	1.75	.88	.87	50
1983	1.70	.77	.93	45
1984	1.62	.77	.85	48
1985	1.62	.71	.91	44
1986	1.78	.82	.96	46
1987	1.88	.83	1.05	44

¹ For quantity of live animal equivalent to 1 retail pound; for beef, 2.4 pounds, and for pork, 1.7 pounds, minus byproduct allowance.

of these foods are more likely to be offset by rising processing and marketing costs. For example, the farm value of commodities used in cereal and baked goods fell 8 percent, representing 0.6 percent of the retail price based on a 7-percent share, but retail prices of these foods rose 3.5 percent, reflecting increases in marketing charges.

#### Farm-to-Retail Price Spread Widened

The farm-to-retail price spread rose 6 percent in 1987, a larger increase than in 1986. Several factors widened the price spread, including higher prices of most inputs used in the food industry, greater use of some inputs per unit of output, such as labor in food retailing and advertising, and higher profit margins on food sales. Labor used in food retailing has increased faster than output, lowering food retailing labor productivity in recent years.

As measured by a food marketing cost index, prices of inputs used in handling, processing, and retailing foods increased by an average of about 2 percent in 1987. A 4-percent rise in food packaging materials, such as paper board shipping boxes, and a rise of about 2 percent in the hourly labor cost index for the food industry contributed most to the increase.

Hourly earnings of food retailing workers were unchanged, but earnings in manufacturing rose about 3 percent and those in wholesaling advanced 5.5 percent. Hourly earnings were stable in food retailing partly because almost half of the 1987 contract settlements contained some provisions for lump-sum cash payments instead of raises. Lump-sum payments are attractive to both labor and management because workers get a pay raise, but the basic wage rates remain the same. The latter is important to retailers because such things as overtime and vacation pay are based on the basic wage rates.

Price spreads increased by 2-19 percent for all 10 major food groups in the market basket, reflecting higher costs, variations in farm prices, and the normal lag in retail price adjustment. The farm-to-retail spread for red meats increased about 7.5 percent, more than double the 1986 increase. However, the price spread for Choice beef declined slightly because higher cattle prices were not fully reflected at the retail meat counter. In 1986, the beef spread reached a recordhigh \$1.06 per pound as a large supply of overfinished cattle burdened the market, sharply lowering cattle prices. In 1987, the farm-to-retail price spread for pork rose almost 10 cents per retail pound, reflecting a sharp rise in retail pork prices but very little increase in farm value.

The price spread for cereal and bakery products widened about 4 percent as retail prices rose 5.8 percent for cereals and 3.6 percent for bakery products. The price spread for cereal may have increased because of rising cereal industry advertising, promotion, and selling expenses to capitalize on growing demand for products that consumers perceive to be nutritionally beneficial. The increase in the spread also reflects a further decline in farm values of food grains and other farm ingredients.

The price spread for poultry, which has increased less than most other foods over time, went up 19 percent in 1987 as farm prices dropped significantly but retail prices remained virtually unchanged due to strong demand. The spread between the retail price and farm value of eggs has changed little in recent years. But the price spread for eggs rose by 12 percent last year as a decline in farm value was not fully reflected at retail. The price spread for dairy products rose about 3.5 percent, reflecting relatively strong demand and rising sales of dairy products.

The farm-to-retail price spread increased 17 percent for fresh fruits and 9 percent for fresh vegetables. Higher retail prices outpaced higher grower prices. Increased prices and price spreads reflect strong consumer demand and higher per capita consumption of fresh fruits and vegetables.

#### **Consumers Spent More on Foods**

During 1987, consumers spent \$375 billion for foods produced on U.S. farms, \$15 billion (about 4 percent) more than in 1986. This amount includes purchases of farm foods in food stores, about 63 percent of the total, and at away-from-home eating places. However, this

#### What consumers spent on foods from U.S. farms

Year	Expenditure ¹	Marketing bill	Farm value	Farm value share of expenditures ²
		Billion dollars		Percent
1977	190.9	132.7	58.2	30
1980	264.4	182.7	81.7	31
1982	298.9	215.2	83.7	28
1984	332.0	240.6	91.4	28
1985	345.4	257.1	88.3	26
1986	359.7	270.0	89.7	25
1987	374.6	279.7	94.9	25

¹ Includes spending at both foodstores and eating places.

figure does not include the money spent for imported food and seafood. Higher food prices boosted spending for domestically produced food. Preliminary data indicate that consumers bought about the same total amount of food per person. Consumption of poultry, dairy products, and fats and oils was higher, but it was lower for beef and some other foods.

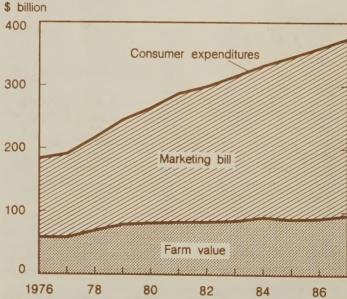
About 25 percent, or \$95 billion, of last year's food spending went back to farmers. This share is a weighted average of the 31-percent farm share of spending for food consumed at home and the much lower 17-percent share of spending for food consumed away from home. The remaining \$280 billion—the marketing bill—went to the food industry for handling, processing, and retailing foodstuffs after they left the farm. Two-thirds of last year's rise in consumer expenditures on farm foods went to the marketing bill, which rose about \$10 billion.

# Higher Labor Costs Added Most to Marketing Bill

About \$4.5 billion of the \$10-billion increase in the marketing bill can be traced to higher labor costs. Packaging materials and food containers added another \$1.8 billion. Industry profits also climbed. Here's USDA's analysis of what happened to food industry costs.

Labor. Total food industry labor costs rose 3.5 percent to about \$129 billion in 1987, due about equally to a rise in employment and increases in employee salaries and wages. Labor costs in the food industry were

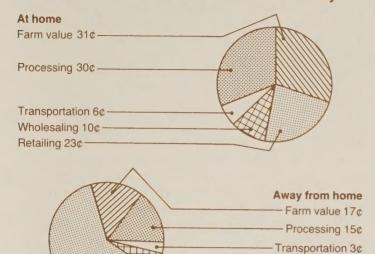
## Marketing Bill, Farm Value, and Consumer Expenditures for Farm Foods



1987 preliminary. Data for domestically produced farm foods purchased by civilian consumers for consumption both at home and away from home.

² This share is lower than the share for the market basket because this share includes spending in eating places, which is heavily weighted by foodservice costs.

#### Where the Food Dollar Goes at Home and Away



about 34 percent of total consumer food spending and

36 percent larger than the farm value.

1987 data.

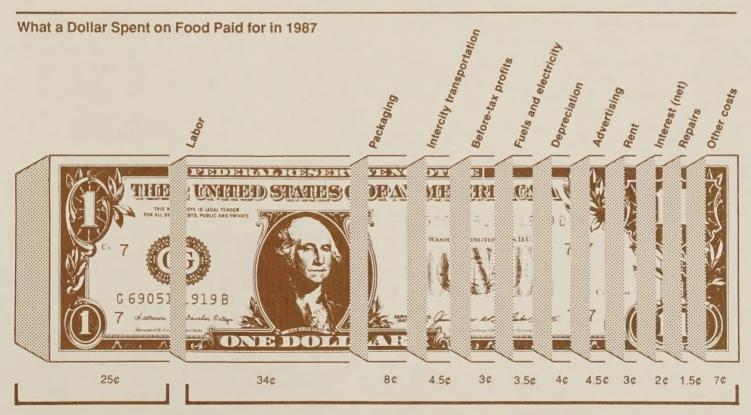
The increase in labor costs, while a large dollar amount, represented a much smaller percentage increase than in 1986. Average weekly earnings of workers rose slightly more last year than in 1986, but

the increase in industry employment was smaller. Food retailing employment rose 2.7 percent compared with 5.5 percent in 1986. That increase was partly because of the growth of service departments in foodstores. Employment rose about 2 percent in eating places and 1.5 percent in food manufacturing; both gains were smaller than in 1986.

Labor costs for the food industry have been tempered by the slow general inflation rate and by labor agreements with workers (particularly in retailing) that provide small wage increases, reduced pay for holiday and evening work, reduced benefits, such as vacation time, and more flexibility to management in scheduling work.

Packaging. Costs for food containers and packaging materials rose in 1987, partly because more food products required greater use of shipping boxes, food containers, and plastic materials. Prices of paper board shipping boxes also were significantly higher, up 7 percent. At nearly \$30 billion, packaging costs were 8 percent of total consumer expenditures for farm foods.

**Transportation.** Costs of transporting foods were up slightly to over \$17 billion in 1987. Railroad freight rates for hauling food products were slightly lower. Truck rates for hauling produce and other foods rose



Wholesaling 6¢

Food service 59¢

Farm Value Marketing Bill

Includes food at home and away from home. Other costs include property taxes and insurance, accounting and professional services, promotion, bad debts, and many miscellaneous items.

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moderately due in part to higher diesel fuel prices. However, strong competition from an increased number of independent truckers tempered rate increases.

Energy. The energy bill for food processors, wholesalers, and retailers was about \$13.5 billion in 1987, less than 4 percent of consumer expenditures for farm foods. Energy costs rose sharply through 1981, but the rate of increase has slowed markedly since then. Last year, diesel fuel prices increased substantially, but electric rates and natural gas prices declined.

#### Food Manufacturers' Profits Rose

Dollar profits in the food industry rose about 7 percent in 1987, reflecting higher profit margins in food manufacturing and larger food sales. Food industry profits (before taxes) from marketing foods of domestic origin were about \$10 billion, or 3 percent of consumer spending for farm foods.

Based on U.S. Department of Commerce data for the first 9 months of 1987, aftertax profits of manufacturers

# Aftertax profit margins higher for food manufacturers

Year	Food manufac- turers	Retail food chains	Food manufac- turers	Retail food chains
	Percentage	e of sales	Percentage of equ	
1980	3.4	0.9	14.7	13.7
1981	3.1	1.0	13.6	13.9
1982	3.1	.9	13.0	12.7
1983	3.3	1.1	12.3	13.6
1984	3.3	1.4	13.3	17.3
1985	¹ 4.1	1.3	¹ 15.3	14.5
1986	4.2	1.1	16.2	11.9
1986 (9 months	3.9	1.0	14.9	11.3
1987 (9 months	) 4.2	.8	15.9	10.7

¹ Data for 1985-87 are not comparable with earlier years because tobacco industry data are included in the food industry data.

of food and tobacco products were 4.2 percent of sales, up significantly from 3.9 percent in 1986. Returns on stockholders' equity rose to 15.9 percent. Profit margins have been raised by low food commodity prices, slowly rising costs, and record new product introductions.

Aftertax profits of food chains averaged 0.8 percent of sales in the first 9 months of 1987, compared with 1 percent a year earlier. Returns on stockholder equity also went down. Last year's lower profit margin partly resulted from a huge loss incurred by one company from selling or closing stores to finance a leveraged buyout. Profit margins of most food chains were higher in 1987 than in 1986 as a result of relatively stable labor costs, and economies resulting from enlarging stores which offer specialty services and greater variety of food and nonfoods. In a continuing effort to reduce costs, retailers have made greater use of automation, including scanning, computers, and communications technology.

# Would You Like More Detailed Information?

This report summarizes a more detailed report, Food Cost Review, 1987, to be published in the summer. In addition to reporting on recent development in food prices, farm-to-retail price spreads, food spending, profits, and marketing costs in the food industry, it discusses price spread changes for leading food items such as Choice beef, milk, and bread. It also includes statistical tables and charts.

To receive ordering information when the report is issued, send your name and address to the Commodity Economics Division, Room 1137, Economic Research Service, USDA, 1301 New York Avenue NW., Washington, DC 20005-4788. Call Denis Dunham at 202-786-1870 if you need further information.